This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A fluid shunting device which is implantable in the eye of a mammalian patient, within a subconjunctival pocket formed between two rectus muscles which are anatomically attached to the eye with a spaced distance therebetween, said device being operative to control the pressure of fluid within the anterior chamber of the eye without the use of sutures to hold the device in its desired implanted position, said device comprising:

a tube having a proximal end, a distal end, a side wall, and a lumen extending longitudinally therethrough;

a diffusion chamber having an inner cavity formed therewithin, a posterior portion of a width greater than the distance between said rectus muscles, and an inter-muscuiar portion of a width less than the distance between said rectus muscles;

said diffusion chamber being mounted on the proximal end of the tube such that fluid which enters the distal end of the tube may flow through the lumen of the tube and into the inner cavity of the diffusion chamber:

2. (Original) The device of Claim 1 wherein the distal end of the tube is insertable into the anterior chamber of the eye, and the diffusion chamber is positionable within the subconjunctival pocket, posterior to the limbus, such that its inter-muscuiar portion is between the locations at which said rectus muscles are anatomically attached to the eye, and its posterior portion is posterior to the locations at which said rectus muscles are anatomically attached to the eye.

3. (Original) The device of Claim 1 wherein the diffusion chamber further comprises:

an anterior portion of a width greater than the distance between said rectus muscles, said device being further positionable within the subconjunctival pocket such that its anterior portion is anterior to the locations at which said rectus muscles are anatomically attached to the eye.

4. (Original) The device of Claim 1 wherein a pressure-openable aperture is formed in said tube, said pressure-openable aperture being biased to a closed configuration, and being openable in response to fluid pressure exceeding a predetermined maximum pressure, within the lumen of said tube distal to said pressure openable aperture.

5. (Original) The device of Claim 1 wherein said diffusion chamber comprises at least one membrane formed of material which will allow said fluid to diffuse out of the inner cavity of said diffusion chamber, while preventing predetermined types of matter from passing through said membrane into the inner cavity of said diffusion chamber.

6. (Original) The device of Claim 5 wherein said membrane is a permeable membrane.

7. (Original) The device of Claim 5 wherein said membrane is a semipermeable membrane.

8. (Original) The device of Claim 5 wherein said predetermined types of matter which said membrane will prevent from passing into said diffusion chamber are selected from the group of matter types consisting of:

a) microbes;

b) proteins;

c) particles exceeding 5 microns in size; and,

d) host cellular matter.

9. (Original) The device of Claim 5 wherein said diffusion chamber comprises material which will allow said fluid to diffuse out of the inner cavity of the diffusion chamber, but will prevent host cellular matter from entering the inner cavity of the diffusion chamber.

10. (Original) The device of Claim 1 wherein said diffusion chamber is formed at least partially of materials selected from the group of materials consisting of:

cellulose, acetate;

cellulosics;

polyesters;

polyfluorocarbons;

polyvinylidene fluoride;

hydrogels;

polyolefins;

a hydrogel made from at least one hydrophilic monomer and at least one olefinic/polyolefinic cross-linker; and,

other natural polymers.

11. (Original) The device of Claim 1 wherein said tubing is formed at least partially from material selected from the group of materials consisting of:

silicone;

hydrogels;

polyurethanes;

polyesters;

latex;

natural rubbers; and,

celluiosics.

12. (Original) The device of Claim 1 wherein said diffusion chamber comprises:

an upper membrane wall having at least one peripheral edge; and,

a lower membrane wall having at least one peripheral edge;

said upper and lower membrane walls being fused to one another about their peripheral edges to form said diffusion chamber.

13. (Original) The device of Claim 4 wherein said pressure-openable aperture comprises an elongate slit.

14. (Original) The device of Claim 13 wherein said elongate slit is formed in said tube such that said elongate slit is substantially parallel to the longitudinal axis of the tube.

15. (Original) The device of Claim 13 wherein said tube has a radius, and wherein said elongate slit extends through the wall of said tube at an angle relative to the radius of which has been predetermined to cause said slit to open when a desired maximum pressure P_{MAX} of fluid is present within the lumen of the tube.

16. (Original) The device of Claim 1 wherein the diffusion chamber has a lower wall through which a tube passage aperture is formed, a proximal portion of said tube being inserted through said tube passage aperture and into the inner cavity of the diffusion chamber, the lower wall of said diffusion chamber being sealed to the wall of said tube.

17. (Original) In a device which is implantable in the eye to treat a disorder of the eye, the improvement comprising:

a first portion of the device having a width which is less than the distance between attachment points of adjacent recti muscles, and at least a second portion of the device having a width that is greater than the distance between attachment points of adjacent recti muscles, such that when the device is implanted in the eye first portion between the attachment points of adjacent recti muscles, the device will be prevented from moving in at least one direction by the abutment of at least the second portion of the device against the adjacent recti muscles.

18. (Original) A method for treating glaucoma in a mammalian eye which has a plurality of rectus muscles attached thereto at spaced-apart attachment locations, by implanting a fluid shunting device at an intended location within the eye to shunt excess fluid form the anterior chamber of the eye, said fluid shunting device being implanted by a method which comprises the steps of:

a) forming a subconjunctival pocket in the eye, between the attachment locations of adjacent recti muscles;
b) positioning said fluid shunting device in the intended implantation location between the attachment locations of adjacent recti muscles, without suturing the device to the eye; and,
c) closing the subconjunctival pocket, such that the device will thereafter be prevented from moving from said intended location by abutment of the device against the adjacent rectus muscles.

19. (Original) The method of Claim 18 wherein the implantable fluid shunting device comprises a tube connected to a diffusion chamber, and wherein said diffusion chamber has an inter-

muscular portion of a width less than the distance between the attachment locations of the adjacent recti muscles and a posterior portion of a width greater than the distance between the attachment locations of the adjacent recti muscles, and wherein step b of the method further comprises:

i. placing the inter-muscular portion of the diffusion chamber between the attachment locations of the adjacent recti muscles;
ii. placing the posterior portion of the diffusion chamber posterior to the attachment locations of the adjacent recti muscles; and,
iii. inserting the tube into the anterior chamber of the eye such that excess fluid will pass from the anterior chamber, through the tube, and into the diffusion chamber

20. (Original) The method of Claim 18 wherein the implantable fluid shunting device comprises a tube connected to a diffusion chamber, and wherein said diffusion chamber has an inter-muscular portion of a width less than the distance between the attachment locations of the adjacent recti muscles, a posterior portion of a width greater than the distance between the attachment locations of the adjacent recti muscles and an anterior portion of a width greater than the distance between the attachment locations of the adjacent recti muscles, and wherein step b of the method further comprises:

i. placing the inter-muscular portion of the diffusion chamber between the attachment locations of the adjacent recti muscles;
ii. placing the posterior portion of the diffusion chamber posterior to the attachment locations of the adjacent recti muscles;
iii. placing the anterior portion of the diffusion chamber anterior to the attachment locations of the adjacent recti muscles; and,

iv. inserting the tube into the anterior chamber of the eye such that excess fluid will pass from the anterior chamber, through the tube, and into the diffusion chamber.

21. (Original) The method of Claim 1 8 wherein the implantable fluid shunting device comprises a tube connected to a diffusion chamber, and wherein step b Comprises:

i. passing a needle parallel to the iris, from the scleral surface within the subconjunctival pocket into the anterior chamber, thereby forming a penetration tract from the subconjunctival pocket to the anterior chamber;
ii. placing the diffusion chamber of the device in a collapsed configuration and inserting it into the subconjunctival pocket;
iii. deploying the diffusion chamber of the device to an uncollapsed configuration such that a portion of the diffusion chamber is located between the adjacent recti muscles; and,
iv. inserting the tube of the device through the penetration tract and into the anterior chamber.